Remarks/Arguments

Claim Rejections under 35 U.S.C. §103 (Obviousness)

The Examiner rejected Claims 1, 10, and 11 as being obvious in view of the teachings of German Patent Application No. DE 32 24 375 (Bilek), German Patent Application No. De 36 15 713 (Wolf), and U.S. Patent Application Publication No. 2003/0024368 (Fukuoka). Applicants respectfully traverse the rejection.

Claim 1

Claim 1 recites: "A microtome or ultramicrotome having a knife, a specimen arm movable relative to the knife, at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system and at least one light source acting as an internal preparation illumination system, and wherein all said illumination systems illuminate a region around the preparation and all illumination systems encompass light-emitting diodes.

Bilek does not teach an incident illumination system

The Examiner asserts that light source 6 acts as a an incident illumination system. Applicants respectfully disagree. The present application defines one aspect of an incident illumination system recited in Claim 1 as follows: "The microtome comprises an incident illumination system 20 that does not serve to illuminate the working region; instead, the light is intended to be reflected from a water-filled collection pan 21 for sections in the direction of optical axis 13 of observation microscope 9." (Figure 2 and page 5, lines 9-13). Applicants submit that these definitions are in keeping with usage in the art. Assuming *arguendo* this is not the case, an applicant can still be their own lexicographer (MPEP 2111.01). Thus, the Claim 1 elements regarding an incident illumination system must be evaluated with respect to the disclosure in the present application.

The aspect of an incident illumination system recited in Claim 1 and described in the specification is completely different than the light source 6 and associated elements shown in

Figure 1 of Bilek in both structure and function. Bilek is silent regarding any other system similar to the incident illumination system recited in Claim 1.

The Examiner interprets the term "incident" to mean "falling upon or striking a surface," and uses this interpretation to support the supposition that the base light of Bilek is an incident illumination system. However, as shown *supra*, the Examiner is not at liberty to use this interpretation, since Applicants have defined these terms in the specification and figures.

Also, in the Response to Arguments (item #11), the Examiner states that Figures 3 and 4 of the present application are similar to Figure 1 of Bilek and therefore, to the same extent that the Applicant discloses a base-mounted illumination system, an incident illumination system, and an internal preparation illumination system, Bilek also discloses these systems. However, Figures 3 and 4 show an aspect of a base-mounted illumination system (page 4, lines 14-16) and are not intended to disclose an aspect of an incident illumination system. Further, the Examiner has failed to mention Figure 2 and the supporting text in the specification which do disclose an aspect of an incident illumination system vastly different than the system shown in Figure 1 of Bilek.

Bilek does not teach an internal preparation illumination system

The Examiner asserts that light source 6 acts as an internal preparation illumination system. Applicants respectfully disagree. The present application defines an aspect of an incident illumination system recited in Claim 1 as follows: "An internal preparation illumination system 50 (see FIG. 7) having at least one light-emitting diode 51 is also conceivable. The use of a light-emitting diode has, in this case, principally the great advantage of low heat emission as compared to miniature incandescent bulbs. The light-emitting diode is provided in specimen arm 3 behind preparation 5. Specimen arm 3 possesses a continuously open tube 52 in which electrical cables 53 for delivering current to light-emitting diode 51 are guided." (Figure 7 and page 7 lines 12-17). Applicants submit that these definitions are in keeping with usage in the art. Assuming *arguendo* this is not the case, an applicant can still be their own lexicographer (MPEP 2111.01). Thus, the Claim 1 elements relating to an internal preparation illumination system must be evaluated with respect to the disclosure in the present application.

The aspect of an internal preparation illumination system recited in Claim 1 and described in the specification is completely different than the light source 6 and associated elements shown in Figure 1 of Bilek in both structure and function. Bilek is silent regarding any other system similar to the incident illumination system recited in Claim 1.

The arguments made *supra* regarding the Examiner's interpretation of "incident" are applicable to the internal preparation illumination system recited in Claim 1. In the interest of brevity, these arguments are not repeated.

In the Response to Arguments (item #11), the Examiner states that Figures 3 and 4 of the present application are similar to Figure 1 of Bilek and therefore, to the same extent that the Applicant discloses a base-mounted illumination system, an incident illumination system, and an internal preparation illumination system, Bilek also discloses these systems. However, Figures 3 and 4 show an aspect of a base-mounted illumination system (page 4, lines 14-16) and are not intended to disclose an internal preparation illumination system recited in Claim 1. Further, the Examiner has failed to mention Figure 7 and the supporting text in the specification which do disclose an aspect of an internal preparation illumination system vastly different than the system shown in Figure 1 of Bilek.

Wolf and Fukuoka do not teach, suggest, or motivate an incident illumination system or an internal preparation illumination system

In the Response to Arguments (item #9), the Examiner states that Bilek teaches a microtome substantially as claimed, but fails to teach the use of LEDs. The Examiner then asserts that Wolf cures the defects of Bilek regarding the use of LEDs. However, Applicants have shown that Bilek does not teach, suggest, or motivate an incident illumination system or an internal preparation illumination system. Wolf and Fukuoka do not cure the defects of Bilek regarding an incident illumination system or an internal preparation illumination system. That is, Wolf and Fukuoka are entirely silent regarding an incident illumination system and an internal preparation illumination system recited in Claim 1 and disclosed in the present invention application.

Wolf does not teach, suggest, or motivate the use of LEDs as an illumination source

In the Response to Arguments (item #9), the Examiner states that Wolf teaches the use of LEDs in a microtome illuminating system. This is not the case. Wolf clearly teaches the use of an LED as part of a proximity sensing arrangement. "The *position sensor* (emphasis added) consists of a light-emitting diode (89), ..." (Abstract). Thus, the Examiner's assertion has no basis in Wolf and Wolf cannot be used by the Examiner to cure the defects of Bilek regarding the use of LEDs in a microtome illuminating system.

There is no motivation to select Fukuoka for combination

Applicants maintain the validity of the arguments presented in the March 16, 2005 Reply that Fukuoka is not analogous to the present invention. For the sake of brevity, these arguments are not repeated in this Reply.

Claim 10

Claim 10 recites: "A microtome or ultramicrotome having a knife, a specimen arm movable relative to the knife, at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system, and at least one light source acting as an internal preparation illumination system, wherein the base-mounted illumination system and the internal preparation illumination system encompass light-emitting diodes.

The arguments for Claim 1 regarding an incident illumination system, an internal preparation illumination system, and light-emitting diodes are applicable to Claim 10.

Claim 11

Claim 11 recites: "A microtome or ultramicrotome having a knife, a specimen arm movable relative to the knife, at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system, and at least one light source acting as an internal preparation illumination system, and wherein the base-mounted illumination system, the incident illumination system and the internal preparation illumination system encompass light-emitting diodes"

The arguments for Claim 1 regarding an incident illumination system, an internal preparation illumination system, and light-emitting diodes are applicable to Claim 11.

Bilek in view of Wolf and Fukuoka fails to meet the requirements for establishing a *prima facie* case of obviousness with respect to Claims 1, 10, and 11. Therefore Claims 1, 10, and 11 are patentable over the cited prior art. Applicants request that the rejections be removed.

Claim Rejections under 35 U.S.C. §103 (Obviousness)

The Examiner rejected Claims 2 and 3 as being unpatentable over German Patent Application No. DE 32 24 375 (Bilek) in view of German Patent Application No. De 36 15 713 (Wolf), and U.S. Patent Application Publication No. 2003/0024368 (Fukuoka) as applied to claim 1, and further in view of United States Patent Number 6,195,016 (Shankle). Applicants respectfully traverse the rejection.

Shankle does not cure the defects of Bilek, Wolf, and Fukuoka

Applicants have shown that Claim 1 is patentable over Bilek in view of Wolf and Fukuoka. Shankle does not cure the defects of Bilek, Wolf, and Fukuoka regarding an incident illumination system, an internal preparation illumination system, and light-emitting diodes recited in Claim 1. Instead, Shankle discloses a fiber optic display system. Therefore, Claims 2 and 3, dependent from Claim 1, also are patentable over the cited prior art.

Claim Rejections under 35 U.S.C. §103 (Obviousness)

The Examiner rejected Claim 4 as being unpatentable over German Patent Application No. DE 32 24 375 (Bilek) in view of German Patent Application No. De 36 15 713 (Wolf), U.S. Patent Application Publication No. 2003/0024368 (Fukuoka), and United States Patent Number 6,195,016 (Shankle) as applied to claims 2 and 3, and further in view of United States Patent Number 4,896,967 (Douglas-Hamilton). Applicants respectfully traverse the rejection.

Douglas-Hamilton does not cure the defects of Bilek, Wolf, Fukuoka, and Shankle

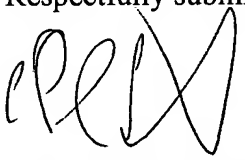
Applicants have shown that Claim 1 is patentable over Bilek in view of Wolf, Fukuoka, and Shankle. Douglas-Hamilton does not cure the defects of Bilek, Wolf, Fukuoka, and Shankle

regarding an incident illumination system, an internal preparation illumination system, and light-emitting diodes recited in Claim 1. Instead, Douglas-Hamilton discloses a motility scanner and method. Therefore, Claim 4, dependent from Claim 1, also is patentable over the cited prior art.

Conclusion

For the reasons set forth above, Applicant respectfully submits that the present application is now in condition for allowance, which action is courteously requested

Respectfully submitted,



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